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ABSTRACT

Legislation and social concern have given new focus and special emphasis to meeting the special needs of the disadvantaged segment of the population. Much recent research has also been concerned with this important priority topic. Intended to be an authoritative analysis of the literature in the field, this "state of the art" paper should assist in identifying substantive problems and methodological approaches for researchers interested in the solution of rural problems, and provide practitioners with a summary of research findings that have application to educational programs in rural areas. This publication reviews the educational disadvantagement of rural people as influenced by socioeconomic and other factors with reference to the accomplishments of vocational and technical education. The review covers pre-vocational to adult and continuing education for the rural disadvantaged. The research information reviewed was gathered primarily through the ERIC system, Dissertation Abstracts, and the library at the Center. (Author/GB)

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review and synthesis

of research on

VOCATIONAL AND TECHNICAL EDUCATION FOR THE RURAL DISADVANTAGED

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REVIEW AND SYNTHESIS OF RESEARCH ON VOCATIONAL AND TECHNICAL EDUCATION FOR THE RURAL DISADVANTAGED

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PREFACE

This *Review and Synthesis of Research on Vocational Education for the Rural Disadvantaged* is one of a series of "state of the art" papers in vocational and technical education and related fields. Legislation and societal concern have given new focus and special emphasis to meeting the special needs of the disadvantaged segment of the population. Much recent research has also been concerned with this important priority topic. This publication should assist in identifying substantive problems and methodological approaches for researchers interested in the solution of rural problems as well as providing practitioners with a summary of research findings that have application to educational programs in rural areas.

This review is intended to be an authoritative analysis of the literature in the field. Those who wish to examine the primary sources of information should utilize the bibliography. Where ERIC document numbers and ERIC Document Reproduction Service (EDRS) prices are cited, the documents are available in microfiche and hard copy forms.

The profession is indebted to Dr. Charles Oaklief for his scholarship in the preparation of this report. Recognition is also due Dr. B. B. Archer, Florida A. and M. University, Tallahassee, and Dr. Hollis Thomas, University of Illinois, Urbana for their critical review of the manuscript prior to its final revision and publication. J. David McCracken, information specialist at The Center, coordinated the publication's development.

Members of the profession are invited to suggest specific topics or problems for future reviews.

Robert E. Taylor
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INTRODUCTION

The need for providing the rural disadvantaged population with vocational education opportunities has been recognized by Congress since the passage of the Smith-Hughes Act of 1917. Since then, numerous legislative provisions to meet specific educational and occupational training areas of rural people have been developed. Although vocational-technical education has received continuing financial assistance, its stature as a national priority has been inadequate.

Recently, increased concern and resources have been focused on disadvantaged people in our society, although the rural disadvantaged have not benefited proportionally. The rural disadvantaged are confronted with economic, educational, cultural, and social problems. This publication reviews the educational disadvantagement of rural people as influenced by socioeconomic and other factors with reference to the accomplishments of vocational and technical education.

The review includes the major areas of vocational-technical education from prevocational to adult and continuing education for the rural disadvantaged.

The research information reviewed has been gathered primarily through (RIE) *Research in Education*, (CIJE) *Current Index to Journals in Education*, dissertation abstracts, and the ERIC system, including (ARM) *Abstracts of Research and Related Materials in Vocational and Technical Education*. The computer search focused on the descriptors of "rural disadvantaged" and the combinations of "vocational-technical education" with "rural," "unemployed," "handicapped," "drop-out," and "disadvantaged groups." The computer search of the material was very helpful as were the (RCU) Research Coordinating Unit directors who contributed information about recent and current educational programs, research projects, pilot programs, studies, position papers, and publications relating specifically to vocational or technical education programs for rural disadvantaged youth or adults.

There is considerable information of a general nature available; however, a scarcity of research exists on vocational-technical education programs for the rural disadvantaged. Research and evaluation on the success and accomplishment of vocational-technical programs on the rural disadvantaged is noticeably lacking.

The purpose of this publication is to review and bring existent research and descriptive information together on vocational and technical education for the rural disadvantaged. It is hoped that this effort will enhance and encourage further study and reporting of educational services on the rural disadvantaged.

The author expresses his appreciation to all who contributed and assisted the completion of this study in any way.

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REVIEW AND SYNTHESIS OF RESEARCH ON VOCATIONAL AND TECHNICAL EDUCATION FOR THE RURAL DISADVANTAGED

THE RURAL DISADVANTAGED

During the past half decade, few problems in vocational and technical education have commanded more expressed concern and national attention than providing relevant and practical occupational training programs for the disadvantaged persons. The impact of this effort has left in its wake a new dimension of concern for the other Americans; the millions of men, women, and children who have been living out their lives as castoffs from the mainstream of the affluent society.

The impact of some billions of local, state, and federal dollars has also catalyzed dynamic changes, innovations, and procedures among the countless educational programs offered in an attempt to improve the socioeconomic well-being of rural disadvantaged persons. At the base of this national emphasis for social, cultural, and economic reform have been the political and financial resources of the federal government.

The federal government has been cognizant of the vast welfare problems of the disadvantaged and has passed legislation giving higher priority to initiating, among other educational efforts, special vocational programs and services for persons with academic, socioeconomic, cultural or other handicaps that prevent them from succeeding in regular vocational or technical training.

Identification and Description

The media have reflected primarily the plight of urban and suburban disadvantaged segments of our society rather than their rural counterparts. The disadvantaged are often concentrated in either the central city slums or the rural depressed areas (Walker, 1970). Copp (1963) states that the displaced worker, the school dropout, the unemployed, and the underemployed are more prevalent in rural areas (Griessman and Densley, 1969). Many of these families have low incomes and the parents of their children have low educational attainment (Ohio State Department of Education, 1971). In addition, Potts (1964) suggests that their environment is totally inadequate for a full life.

In such homes, books are seldom available and reading is not encouraged. Often, these "slow learners" would not be successful (Breathitt, 1967a) under the traditional vocational school standards, since they have a low level reading ability, limited formal vocabulary, poor speech construction, and poor diction. The Federal Register defines disadvantaged students as:

> . . . persons who have academic, socioeconomic, cultural, or other handicaps that prevent them from succeeding in vocational education or consumer and homemaking programs designed for persons without such handicaps, and who for that reason require specially designed educational programs or related services. The term includes persons whose needs for such programs or services result from poverty, neglect, delinquency or cultural or linguistic isolation from the community at large but does not include

physically or mentally handicapped persons, unless such persons also suffer from the handicaps described in this paragraph (National Committee on Employment of Youth, 1969).

The disadvantaged, in both the central city slums or the rural depressed areas, are characterized by various similarities. The National Committee on Employment of Youth (1969) identified such similarities as low family incomes, low parental education, low reading ability, and limited vocabulary as characteristics of socially and economically disadvantaged families. The disadvantaged are largely disillusioned and frustrated by the American school system, as manifest in their difficulty and limited success in conventional school settings. These disadvantaged are referred to as special needs students in many areas (Ohio State Department of Education, 1971). Their behavior in the formal school setting depicts a dichotomy of extremes; either hostility and unruliness, or passivity and apathy (National Committee on Employment of Youth, 1969).

Howe (1966), in a study of occupational and vocational training needs of rural high school dropouts, determined that males dropped out because of loss of interest and dislike of school and course work. Females reported marriage or pregnancy as their major reasons for leaving school.

Psychologically, the disadvantaged drop out of school two or three years before they drop out physically. Both the quality of schooling available and academic achievement of the pupils tend to be below the national average (National Committee on Employment of Youth, 1969). According to Anderson (1965) and Campbell (1966), the academically and socioeconomically rural handicapped include youth and adults from both farm and rural nonfarm families.

According to Swanson (1970a), the urban and rural disadvantaged have many similarities; however, if America's urban population did not exist, its remaining rural population might be classified as an underdeveloped country. In this respect, Swanson considers the most obvious characteristics of rural America to be its poverty and low level of public services. Rural America has a disproportionate share of disadvantaged population groups that may be identified as low income and limited opportunity agricultural workers. Dawson (1965) includes in this group hired laborers, subsistence farmers, and the migrating farm laborers. Hardly any state or region of our country is without its pocket of rural poverty.

In addition to low income, the rural disadvantaged are also characterized by a high unemployment rate: four percent nationally and 18 percent for rural areas (Edington and Tamblyn, 1968), low educational attainment, poor housing, hunger, malnutrition, and a higher infant mortality rate than among the least privileged groups in urban areas. The Office of Education (1970) identifies rural underemployment at approximately 37 percent. Also, 14 to 15 million persons in the United States were classified as the rural poor; 78 percent of these are white. Although only 29 percent of the nation's population live in rural areas, 43 percent of its poor are identified as living in rural America. In metropolitan areas, one person in eight is poor; in rural areas, one person in four is poor.

Demographic Factors

The rural disadvantaged family is part of a declining population area. In 1960, approximately 58 million people or 29 percent of the nation's 202 million people resided in rural America (Dawson, 1964) (Bureau of the Census, 1960) (Moe, 1969). The proportion of persons living on farms has decreased to less than 20 percent of the rural population (Office of Education, 1970).

Since 1950, the number of rural youth who do not live on farms has outnumbered those who do. According to Amberson (1968), only two states had more than 25 percent of their rural youth living on farms in 1960. Employment growth has been almost entirely in cities, thus the opportunities for employment of rural youth have declined. Minority groups present a similar situation. Over the 10-year period, 1950-1960, the percent of rural Negroes on farms was found to decrease from 27 percent to 20 percent. Rural Indians on farms decreased from 25 percent to 18 percent (Johnson, 1967). Between 1950 and 1960, urban employment rose 9.2 million while employment in rural areas declined by .4 million (Bureau of the Census, 1950; 1960).

As a result of declining rural resources and employment opportunities, our nation is plagued with rural poverty extending through most areas of our country and encompassing some 14 million persons. It is estimated that the total number would be even larger if many rural persons had not migrated into the urban areas (Pearson, 1967). The rural disadvantaged youth represent about 1.3 million persons in the 15-19 year age category. There are about 600,000 youth in the 20-24 years old age group in rural farm areas, and about 2.5 million youth in the rural nonfarm group.

Ecological and Economic Factors

Where a population group depends on natural resources such as mining, forestry, limited agricultural production, and intermittent employment opportunities, there is a high degree of rurality (Charles, 1968) with population centers usually under 2,500 persons. In this environment, more than half of the rural families have incomes below $3,000 (Swanson, 1970a; Boykin, 1969) and about two-thirds have very limited means of transportation or communication within their community (Walker, 1970), and an educational attainment which lags by almost three years.

The effect of low family income on student aspirations and achievement is negative. In a study of 601 rural students, Larson and Slocum (1969) found that when compared to youth from high income families, rural low income youth were less likely to be interested in school, to receive high grades, to receive encouragement from teachers, or to report high levels of education and occupational aspirations.

Every thirteenth house is classified as unfit for habitation in rural disadvantaged areas. Considering the "bad" housing in the United States, 44 percent is located in rural areas (Office of Education, 1970).

Rural poverty in the United States has no geographic boundaries; it is acute in the South, but it is also serious in the East, the West, and the North. Rural poverty is not limited to race; it permeates all races and ethnic groups. Actually, whites outnumber nonwhites among the rural poor by a wide margin. Likewise, rural poverty is not limited to the farm, for the farm population is only a small fraction of our total rural population. Most of the rural poor do not live on farms (Breathitt, 1967a); they live in the open country, in rural villages, and in small towns.

Generally, the rural disadvantaged are employed in seasonal, marginal employment at menial tasks (Baca, 1969) and often are forced to be migrant workers on farms across the country. The migration from rural to urban areas makes little change in the economic status of the disadvantaged. Urban residents with rural backgrounds do not achieve as high an economic status as urban reared residents. Indications are that education level, age, and number of years lived in the urban environment are factors correlating to the level of economic status (Edington and Tamblyn, 1968).

Family and Social Factors

The out-migration of residents from rural areas suggests other problems, such as social relationships, which tend to prevent chances for self-help among the rural disadvantaged. The concentration of social and political functions in larger towns and villages and the out-migration of thousands of rural people have resulted in the breakdown of many rural, social, and political organizations which many rural residents had used for interaction and contact with the outside world (Office of Education, 1970). Thus, rural disadvantaged families have become cultural, social and economic isolates. In relating economic and social factors, rural poverty means more than inadequate income. It means isolation from educational and occupational opportunity, from respected positions in society, from acquaintance with stable homes and family arrangements, and from social interaction with successful people (Davis, 1969; Taylor and Jones, 1963).

Even if rural people mounted a concentrated effort for improved and innovative programs, their diminishing political power would make it a tough battle. Such an effort does not seem likely, for rural people tend to be content with traditional patterns and urban people are content to let them be (Taylor and Glasgow, 1963). Meanwhile, the drop-out rate from school continues, rural youth, often ill-equipped, migrate to the cities, underemployment lingers, and the gap between rural and urban per capita income widens (Griessman and Densley, 1969; Johnson, 1967; Edmunds, 1969; Rohde and Hall, 1968).

The satisfaction rural disadvantaged families express with their way of life seems to indicate that they prefer to remain in these areas. Rural students, generally, have not wanted to migrate from rural areas (Fuller and Phipps, 1968a; Griessman and Densley, 1969). Such families are willing to accept the fact that compared with people from more affluent urban and rural areas, they are living in a disadvantaged situation (Potter, 1969).

When migration occurs, the greatest stream from farm to rural nonfarm communities to urban areas is girls and women; the boys and men are left behind (Dawson, 1964). In some rural families, there is considerable fear that the youth may leave home, thus careers are not encouraged (National Committee on Employment of Youth, 1969). In some cases, the need for additional family income leads to early school dropout in preference to a job. The decision to remain in a rural area resulted in depressed aspirational levels (Taylor and Glasgow, 1963; Office of Education, 1966). Boykin (1969) reported that aspirations of urban youth were higher than for rural youth in a study of over 550 students. Another study indicated aspirational levels of the nonfarm oriented farm-reared boys approximated those of the rural nonfarm and small-town boys; however, rural young adults were found to move from job to job less than their urban counterparts (Griessman and Densley, 1969; Bundy and Kahler, 1970).

Personal Problems and Adjustments

The rural disadvantaged have had little assistance from society and have not taken the initiative to improve their own conditions. Interestingly, the rural poor have not rioted, burned, or looted. They are too scattered and most are unaware of the scope of their poverty (Office of Education, 1970; Potter, *et al.*, 1969). In this respect, educational and socioeconomic programs have not reached the rural disadvantaged. They have benefited little from the present efforts of society to change the lot of the nation's poor. Low educational attainment has been suggested as a major deterrent to job placement for the rural disadvantaged (University of Nevada, 1967). The rural disadvantaged dropout is a major concern for educators (Cowhig, 1963). Howe and Buntrock (1966) found that most rural disadvantaged school dropouts were from large families, and had brothers and sisters who had also dropped out. Aller (1967) indicates the value orientation of many rural youth fails to bring about successful transition into the country's labor force.

RATIONALE FOR VOCATIONAL AND TECHNICAL EDUCATION

Each year over 750,000 individuals enter the job market without the necessary skills and attitudes for employment (National Advisory Council on Vocational Education, 1969). Thus, it would appear that a high percentage of these persons could benefit directly from vocational and technical training aimed at imparting a wide range of entry work skills (University of Nevada, 1967).

The outlook for success among the rural disadvantaged and the existing vocational-technical programs, however, is not optimistic. Griessman and Densley (1969) suggest that there is little reason to believe that the problems of rural areas which beset occupational education will rapidly improve. Forces for change and improvement within the rural sector are few. Present educational programs are inadequate; however, there are rural schools in some areas which do equal, if not exceed, urban schools in the excellence of their occupational programs. These however, are exceptions (Griessman and Densley, 1969; Dawson, 1964). It is not surprising then, that over 3 million rural adults are classified as illiterates (Breathitt, 1967b). The rural disadvantaged have been shortchanged in both educational facilities and opportunities. Hence, rural workers are poorly educated (Office of Education, 1970) and have difficulty competing for skilled or semiskilled jobs in manufacturing, the trades, service, and construction industries or in government (Advisory Council on Vocational Education, 1968). An estimated two to four million persons in the rural work force need to upgrade their work skills (Rural Poverty in the United States, 1968).

One of the problems is that disadvantaged rural Americans have not acquired adequate spokesmanship or representation to solve educational and economic problems found in their areas. Rural education has been guided by prudence and economy. According to Swanson (1970a), rural educators have required that school curricula be college preparatory in nature. Thus, most rural youth have had to move from their local areas either to get vocational-technical training or a job (Breathitt, 1967a). These factors, along with low socioeconomic levels and limited contact of rural disadvantaged youth with the industrial world, have created enormous problems in providing appropriate vocational-technical education in the rural disadvantaged areas (Griessman and Densley, 1969). According to Ramsey (1967), these problems are interrelated, and for any constructive action toward solution, will require combined community and educational resources and development programs.

The lack of success among existing vocational-technical programs in meeting the special environmental considerations of the rural disadvantaged has been established (Walker, 1970). Many disadvantaged rural students have not succeeded in vocational programs even when they have exhibited interest in such training efforts. The result was dissatisfaction, failure, and dropping out of school. A basic problem of the rural disadvantaged student is his limited desire to learn. This leads

to low achievement and dissatisfaction with the school. Eventually, such students look elsewhere for success and fulfillment. Where parents and schools prevent these students from leaving this situation, they might choose to withdraw, stay away from school, or develop unfavorable attitudes and behavior. Ultimately these individuals become a problem for the school, their parents, and society. Those rural disadvantaged remaining in school often have not profited from their educational experiences (Venn, 1964).

Rationale and Need for Vocational and Technical Education

Estimates indicate that by 1980, improved work and employment opportunities for rural people could add over 40 billion dollars a year to the gross national product in the United States (Breathitt, 1967a). The depressed rural areas should be provided the necessary educational and economic input to correct their disadvantaged conditions. The potential economic and social contribution by the disadvantaged to society is great. Success in the fight against poverty for the rural disadvantaged will depend on sound educational programs (Fuller and Phipps, 1968a) that will bring about desirable changes in attitudes, behavior, and vocational competence (Griessman and Densley, 1969).

There is great need for vocational and technical training for the rural disadvantaged if they are to be able to take advantage of existing and future occupational opportunities. This effort must not be delayed until urban areas are forced to deal directly or indirectly with rural disadvantaged dropouts that migrate to our cities. The approach to any solution to the problem needs to encompass both improved employment opportunities and training (Fuller and Phipps, 1968a; Pearson, 1967).

According to Knebel (1963), programs in vocational education are becoming more technical with increased costs, which further reduces their availability to the rural disadvantaged. Burchinal (1963) expressed the urgency for vocational training for the rural disadvantaged. Even though enrollment in vocational education programs for students with special needs has increased (National Committee on Employment of Youth, 1969), the high rates of student dropouts and youth unemployment reinforce the urgency for vocational-technical education. The schools in economically depressed rural areas have been unable to equal the general increase in quality and unity of educational opportunities that are being provided across the country (Dawson, 1964). Rural schools must not be content to meet the educational needs of their own local areas (Mahlstede and Thomas, 1968). Training which will enable rural youth to compete for jobs in other geographic areas is needed.

Educational Needs

It may soon be that farm families can no longer be equated with rural communities and all rural people. The realization that farm mechanization has steadily reduced the availability of unskilled farm-related

jobs is manifested when our untrained rural youth meet the frustration of unemployment (Aller, 1967). Mechanization has been a cause of much of the problem. Between 1950 and 1965, new machines and techniques increased farm output in the United States but reduced farm employment by 45 percent. According to Lottis (1966), youth from these families are not likely to have the necessary training for current job demands.

Projections indicate that only one farm boy out of 15 can actually be employed in farming during the next 20 years. Research suggests that 40 percent of the farm operators must find off-farm employment over the next 20 years (Heady and Tweeten, n.d.).

The prospectives on vocational-technical education for the rural disadvantaged need to include those persons who could benefit from adult and continuing education. Improving income and management of the rural disadvantaged family may contribute to more effective occupational training opportunities for disadvantaged youth. Present programs of adult education are not reaching a substantial number of low income farmers who could profit most from such instruction (Warmbrod and Phipps, 1966). It appears appropriate that programs of adult education in agriculture and homemaking be developed for unemployed and underemployed agricultural workers under the provisions of the Manpower Development and Training Act. This approach relates directly to meeting the training needs of unemployed adults. Due to a situation wherein the number of job openings for older persons falls short of the demand for such jobs, rehabilitation efforts should accompany extensive job development programs (Rusalem, 1967). Thus, specific measures should be taken for stimulating job development for disadvantaged adults in rural areas.

PROVISIONS FOR VOCATIONAL AND TECHNICAL EDUCATION

In 1962, the Panel of Consultants on Vocational Education conducted a six state survey of 3,733 public high schools to determine which programs of vocational and technical education were being offered (Office of Education, 1970). The statistics for these states showed that in communities of under 2,500 population, only two percent of the high schools offered distributive education courses; however, 42 percent offered courses in home economics and 49 percent in agriculture.

The rural disadvantaged have been less fortunate in having adequate vocational opportunities than urban youth. Most efforts by vocational and technical schools to provide effective education for youth and adults in disadvantaged rural families have been rather unsuccessful (Fuller and Phipps, 1968a). Traditional programs have offered very limited occupational training experiences even to youth or adults from disadvantaged farm families.

As previously indicated in identification and description of the rural disadvantaged, American Society has not emphasized or provided the needed vocational-technical education for the rural disadvantaged population. This general neglect, however, has received the attention of a number of educators, legislators, and business leaders; the end result has been legislative provisions, community action, and special projects on both state and federal levels.

The Role of Government

Both Congress and the state legislatures from time to time have enacted numerous laws and appropriated large sums of money to improve the lot of our rural disadvantaged population. These efforts have been manifested in numerous programs, aimed mainly at the full or partial obliteration of poverty. Large sums have been directed into educational and community developmental efforts. Most antipoverty efforts have remained in urban areas, however, rural areas as well as urban areas are served through various sweeping welfare and educational reform bills.

Congress through the Manpower Development and Training Act (MDTA) of 1962, recognized that serious occupational shortages existed concurrently with high levels of unemployment. MDTA provided for a federally assisted program to improve the labor market function of matching workers and jobs. Thus, MDTA served the disadvantaged in both urban and rural areas (Aller, 1967).

Statistics of the United States Department of Labor (Warmbrod and Phipps, 1966) indicate that Manpower Development Training Act programs in 1964 had over 5,270 trainees enrolled in institutional and on-the-job training projects categorized as agricultural.

The United States Department of Labor (1966), indicated that 4.4

percent of the 105,733 trainees authorized for MDTA institutional training during 1965 were receiving training in production agriculture. Rural America's attempt to provide vocational and technical education through a comprehensive system of education has been most inadequate (Swanson, 1970a).

Many of the successful attempts made by the government have been directed toward the provision of both educational and an employable skill through various community action programs such as the Job Corps, VISTA and the Neighborhood Youth Corps (Pinnock, 1967; Gregory, 1969). One such program, The War On Poverty, includes efforts which are, in effect, vocational training. The Job Corps involves the training of disadvantaged youth, including rural disadvantaged, in specific occupational skills.

The Vocational Education Act of 1963 has directed emphasis toward research pertaining to the economically and socially disadvantaged. The Vocational Education Amendments of 1968 call for important changes of emphasis in American education requiring at least 15 percent of the basic federal allotment to vocational education be used only for disadvantaged persons. In enacting this law, Congress directed educators to provide vocational education orientated to the needs of people instead of aimed at rigid categories in a limited number of occupations (National Committee on Employment of Youth, 1969). Inherent in the Act was the concept of changing vocational education from training in selected occupational categories to helping prepare all community groups for a place in the mainstream of the world of work. The Act also directed that vocational education be more responsive to the needs of persons with special difficulties which might prevent them from succeeding in a conventional vocational program.

The results of this effort have not been overwhelming. In 1968, only nine percent of the area and technical school enrollment was from small schools and villages. In this respect, the National Advisory Council on Vocational Education in its 1968 General Report states that the Act has fallen short of fulfilling its major purposes. Authors of the Report recommended that a substantial portion of vocational education funds be reserved for the "hard to reach" and the "hard to teach" (National Advisory Council on Vocational Education, 1968). The Vocational Education Amendments of 1968 state:

> If certain disadvantaged or handicapped persons cannot benefit from regular vocational programs to any extent, even with modifications, . . . then these persons shall be provided with special programs of vocational instruction which meet the standards and requirements of regular vocational programs set forth in No. 102.4.

The Role of Business and Industry

Until federal programs provided the motivation, largely through

funding of special employment efforts for the hard-core unemployed, business and industry were slow to support any vocational or technical education efforts for the disadvantaged, urban or rural. Overall, industry has been sympathetic to the cause of vocational-technical training for the rural disadvantaged. There appears to be a paradox, however, in the feeling that industry cannot find locally qualified employees while at the same time young people cannot find good jobs. Rural youth are particularly disadvantaged in their contact with the world of business and industry (Griessman and Densley, 1969). It appears the answer can only be a cooperative interest and effort among educators, industry, and community leaders in preparing the rural disadvantaged for employment (Swanson, 1958-59; Ramsey, 1967).

Research regarding the attitudes of industry and secondary school administrators toward vocational-technical education indicates that both industry and educators are more concerned about the needs of students than the needs of industry (Nagel, n.d.). In reference to training, both industry and educators feel the most positive way to serve the student is through vocational-technical educational programs designed to meet the needs of local and out-of-state industry. In a study to determine the need for technical education for persons in rural areas, Phipps (1964) determined that the need for techniques is increasing rapidly in some rural areas. The cluster concept in which curriculum is designed to meet the needs of clusters of workers needing technical education was explored.

Nagel (n.d.) found that in implementing such programs, respondents reported as necessary for employment, a program beyond the high school, including specialization and qualifications for a specific job. There was a definite need for programs of a more technical nature. The ultimate responsibility for vocational-technical programs, it was felt, was with public schools rather than industry. Industry indicated a preference for the combination of local, state, and federal monies as a means of financing vocational-technical education.

Educational Patterns

The National Committee on Employment of Youth (1969) has indicated it is no longer possible to compartmentalize education into general, academic, and vocational components. The committee implies that vocational education is not a separate discipline within education, but rather a basic objective of all education and a basic element of each person's education. The various aspects of our society may be viewed in relationship to vocational and technical education through a dynamic model. Such a model suggests to a problem solving situation setting for vocational and technical education consisting of the following components: 1) Unrealized human and social goals; 2) existing laws, programs, and educational philosophies; 3) past and current theory in research findings; and 4) alternative solutions (Thomas, 1966).

One aspect of social needs relative to justifying support for vocational-

technical education was associated with family attitudes of the disadvantaged (Fuller and Phipps, 1968a; Taylor and Jones, 1963). The family attitudes learned by many disadvantaged rural youth are not conductive to development of full educational and employment potential. Most existing and proposed vocational education programs for disadvantaged youth focus primarily on the youth himself and fail to give adequate attention to his functioning as a member of a family. Fuller and Phipps (1968a) denote that our existing educational programs depend on the indirect or "fall-out" process as the means of changing family attitudes so they will be supportive of optimum vocational education. In the fall-out process, the assumption is made that disadvantaged youth who receive vocational education will develop desirable attitudes toward work and vocational education, and will transmit these attitudes to their families. The problem is that educational efforts of the schools may be ineffective since they are in conflict with family mores. Those disadvantaged youth who benefit from present vocational-technical programs often leave home without affecting significantly the attitudes of their families. Thus, the other family members remain unchanged in their respective communities (Fuller and Phipps, 1968a; Bundy, 1970). The problem is repeated and possibly intensified for the younger family members. Fuller and Phipps also project that little, if any, permanent rural area and economic improvement is accomplished in existing vocational-technical education programs.

Another educational effort evolves among middle-class citizens (Campbell, 1966) concerning their perception of the function of present day school systems: emphasizing knowledge for its own sake. The culturally deprived do not always have this perception. The result is a widening gap between their association of education and success. Thus, vocational-technical education for the rural disadvantaged may be more positively received when presented in the rural setting for available local job skills. Our society may well accept the moral responsibility for improving the depressed rural areas rather than attempting to cast rural people into the mold of urban society (Fuller and Phipps, 1968a, 1968c; Helen Johnson, 1967). On the other hand, to assist rural people in adjusting to employment in nonfarm occupations, the educational system should, in the light of industrial and occupational trends and job market outlook, equip the rural work force for employment in growing industries or for mobility to other areas (Office of Education, 1970; Ramsey, 1967; Edmunds, 1969; National Advisory Council on Vocational Education, 1968).

ACCESS TO VOCATIONAL AND TECHNICAL TRAINING

During the past two decades, emphasis has been placed on vocational and technical education programs for the rural disadvantaged. Federal participation in the form of financial assistance has increased the number of research projects, pilot programs, exemplary efforts, and various other vocational-technical education programs for the rural disadvantaged. The opportunity to experience vocational-technical education by those in rural depressed areas has been enhanced by various federal and state efforts. There have also evolved lists of educational materials (Potts, 1965), studies of occupational needs of the socioeconomic and rural disadvantaged (Hirst, 1967; Perryman, 1969), special vocational training efforts (House, 1967), and identification of the rural poor (Office of Education, 1966).

Local and Area Vocational-Technical Schools

Those responsible for training in rural local and area vocational-technical schools have been in a key position to offer programs for the disadvantaged; however, existing programs have limited their input in this area. The over 1,300 area vocational schools throughout the nation (Office of Education, 1970; Dawson, 1964) have provided for the vocational needs of a limited number of students from small rural schools. In another study it was determined that of the total students in high school vocational-technical education, only 1.5 percent attended an area vocational-technical school, and only nine percent of all students attending vocational-technical schools were from small schools (Amberson, 1968). In many areas, the terms rural schools and small schools are no longer synonymous due to the area vocational school effort. According to Amberson (1968), many of these students can be identified as rural disadvantaged; yet they are served through conventional vocational and technical programs. These students usually spend a half day at the area school in vocational training, and the other half of the school day at their home schools in comprehensive education. The Rural Task Force on Vocational and Technical Education (Office of Education, 1970) has identified a number of programs across the nation which are serving rural youth and disadvantaged students. Team teaching efforts are included in a diversified cooperative program for youth in Paoli, Kansas. These students make direct observations of workers in four different occupations and later begin their own cooperative program of work experience.

Another program, conducted at Magnet Cove High School in Arkansas, makes it possible for employees from industry to supplement the skills of the agriculture teacher by offering blocks of lessons in different trades for third-year agriculture students. Students have been able to get entry-level jobs in industry and supplement income earned from their small farm enterprises.

In Iowa, an itinerant teacher in food service is hired as a consultant on the home economics staff in the State Department of Education. The

teacher travels among the small schools, offering lessons which help prepare youth and adults for food service occupations.

The Western States Small School Project offers an integrated career development curriculum and development of areas of generalized vocational capabilities.

A farm management program conducted in Tennessee under the provisions of the Manpower Development and Training Act (Warmbrod and Phipps, 1966) increased the average net worth of 20 students by more than $3,000. The program spanned a two-year period. In Oklahoma 225 men, mostly high school dropouts, received training in 16 farm mechanics schools under the Area Redevelopment Act.

The Mayo State Vocational-Technical School, Paintsville, Kentucky, makes it possible for all people, regardless of their status in life, economic condition, or vocational background, to have the opportunity to learn a trade. The program is currently being operated as a residential school where students can obtain a room at the least possible expense. The Mayo School, according to Swanson (1959), was the first in Kentucky to operate extension centers. All high school students were able to study a trade during their junior and senior years by attending three hours per day at a nearby center. Thus, students were able to complete one-half of a two-year vocational course while still in high school. Through the seven extension centers, students can continue the study of their trade after graduation from high school by transferring to the Mayo School at Paintsville. The Mayo School offers advantages in sharing and pooling total educational resources in a geographic area similar to the general area vocational school concept (Swanson, 1959).

INNOVATIVE AND EXEMPLARY PROGRAMS

The approach to initiating vocational and technical education for the rural disadvantaged is usually a study or survey. The purpose of such studies includes identification of rural disadvantaged populations, employment opportunities, occupational training needs, financing, organization, and application. Such a study was initiated in Wyoming (Perryman, 1970) to determine factors in establishing and operating a Cooperative Comprehensive Education Service Center. Educational service centers are being initiated by existing school systems to solve vocational training needs peculiar to a given geographic area. According to Perryman (1970), a survey was designed to determine:

1. the factors affecting establishment of an "area" concept for educational service centers.
2. the amount of taxable wealth necessary to establish and support the "area" center.
3. the student enrollment needed to offer education in technical and skilled occupations in the area.
4. the needed voter approval, student interest, industrial support, and geographic area to establish the "area" center.
5. the number and location of needed or existing area centers.

The Comprehensive Education Service Centers represent a geographic education region where an articulated comprehensive education program is available to serve residents of a particular land area configuration or district.

In the Comprehensive Education Service Center, occupational education is considered by educators as a system. Perryman found that orientation of these systems should begin with educational needs, flexible programs to meet these needs, and possible staff and facilities to meet needs. In this respect, area vocational schools are not viewed primarily as facilities, but as organizational entities designed to meet educational needs. The study concluded that emphasis should be directed toward the most effective utilization of resources to meet educational needs (Perryman, 1969).

Vocational Education for Rural Minority Groups

Vocational-technical education for rural minority groups was emphasized in Minnesota through a state conference on "Vocational-Technical Education and the Rural Renaissance" (Office of Education, 1969). The conference included service to special rural minority groups, including the Minnesota Indians. Other special programs were reviewed in a description of special vocational programs for the disadvantaged in Pennsylvania (Moody, 1970). This research publication provides a review of the major programs that were funded for the disadvantaged during 1970. Included is a report on six occupational areas in vocational education. A program for migrant workers on farm equipment operation and maintenance and

a work study program for disadvantaged youth is described (Moody, 1970).

One of the most extensive programs found in the literature relative to human resource development was initiated by Fuller and Phipps (1968a). The purpose of this program for disadvantaged families in depressed rural areas was to develop effective vocationally-oriented educational programs to utilize the capabilities of economically and socially handicapped rural youth. The project provided important anthropological, economic, psychological, and sociological data and identified the status of disadvantaged rural families for the development of effective educational programs for depressed rural areas. Fuller and Phipps (1968a) have established a rationale to overcome a number of obstacles in the development of vocational competence for gainful employment among disadvantaged youth and adults in rural areas. These obstacles included:

1. failure to obtain the attention of deprived rural families.
2. failure to create readiness for learning.
3. failure to recognize the importance of family ties.
4. failure of disadvantaged rural families to assess their problems, define their objectives, identify possible alternatives for solving their problems, select definite objectives, and plan a program for obtaining these objectives.
5. failure to involve the lay citizens, at all economic levels, in the development and identification of opportunities, the providing of support, and the teaching of specialized vocational skills and abilities needed by disadvantaged youth and adults.

The project described by Fuller and Phipps was designed to overcome the five problems listed above by:

1. involving disadvantaged rural families in planning their own educational program.
2. involving the families in studying their present work activities and their outcomes through a "starting where they are approach."
3. utilizing the family as a basic educational unit to provide security and create readiness.
4. using family focused meetings as advance organizers toward later specialized vocational education.
5. developing a model, vocationally oriented, educational program that will cause youth and other members of disadvantaged rural families to become interested in vocational education and to take advantage of vocational opportunities. The model educational program was to be evaluated using experimental techniques.

The primary objectives of the project are to: 1) study a depressed rural area to identify conditions and trends that typify the area, 2) develop and conduct a model preparatory and vocationally oriented educational program for disadvantaged families in depressed rural areas which will lead to gainful employment of youth, 3) evaluate the educational program in terms of the processes and the results obtained.

A comprehensive approach to general occupational education was reported by the Kanawha County Schools and Action for Appalachian Youth Inc. (1965). This program provided for special needs of rural, nonfarm disadvantaged youth beginning with a preschool effort, and continuing through vocational orientation and occupational experiences for older youth and adults.

Three divisions of educational experiences, supplementing existing school programs, were offered through the Kanawha County School System. A preschool program prepared disadvantaged children for school. An intermediate division emphasized reading, writing, and subjects relating to community life. The senior group emphasized individual potentials, the world of work, and occupational training. There were 132 participants reported in the exemplary project.

A number of innovative and exemplary programs for training the rural disadvantaged have been reported in Ohio (Ohio State Department of Education, 1971). The "Project Life" program has provided vocational orientation, enrichment, and exploration for over 600 Ohio rural disadvantaged students. Activities included in-service training for teachers of the rural disadvantaged, a vocational exploration program for the youth, and individual and group counseling.

Further listings of educational innovations program plan and exemplary projects for rural and disadvantaged youth are contained in a compilation of research abstracts by Edington and Tamblyn (1968) and Wall and Shill (1969).

Prevocational and Exploratory Programs

Preparation for the world of work, particularly since the Vocational Education Act Amendments of 1968, has come to include career exploration and occupational orientation from elementary school on through high school. Any occupational exploration provided for rural disadvantaged youth relating to forming an occupational commitment or interest might be construed as prevocational and exploratory in nature. Vocational educators have more recently emphasized the importance of prevocational or occupational exploration for the disadvantaged to provide an orientation to gainful employment.

As indicated earlier, many disadvantaged students do not succeed in conventional vocational programs and thus have a tendency to become dissatisfied and drop out of school. Walker (1970) has described a prevocational laboratory centered curriculum project for rural disadvantaged youth, the objective of which was to change negative attitudes of academically disadvantaged students toward school, teachers, and learning involvement and to prepare the students to enter and succeed in high school vocational programs. This effort was designed to plan, implement, and evaluate an activity-centered instructional program in applied biology and agriculture for disadvantaged youth.

The major concern, as reported by Walker (1970), was to make it

possible for the student to achieve a background of successful experiences to compensate for the years of failure and frustration encountered in a traditional program. The students in this program could demonstrate to themselves that they could achieve and be successful in school. They experienced accomplishment and developed the desire to continue in additional vocational training activities.

The major accomplishments of the prevocational laboratory experience included: 1) identification of potential dropouts, 2) development of a land laboratory, 3) building of a strong liaison among cooperating agencies, and 4) substantial improvements in student behavior and progress.

Providing opportunities to more effectively prepare youth to enter the world of work was the purpose of a special project by Bruce (1970). The total project effort consisted of a three-week institute and a two-year pilot project. The institute was held to prepare teachers, administrators, and guidance counselors to conduct a two-year pilot program. The pilot program was designed to give students an opportunity for broader exploratory experiences in four vocational areas. The project represents an attempt to bring vocational training into harmony with local industrial, economic and social needs.

Simulated Occupational Experience Programs

Simulated vocational and technical education programs have developed to meet the demands for training where conditions have prevented the application of "on the job" work experiences. The provision of training under simulated conditions has been practiced as part of the conventional teaching-learning process in occupational training for some time. It has been in more recent years, particularly since 1945, that simulated training programs have been applied to training for complete job skills and occupational experiences.

Riley and Omvig (1970) describe a developmental program using simulated occupational experience for rural youth in Kentucky. This simulated experience in distributive education served the educational needs of rural youth who would otherwise be denied a program in distributive education. A purpose of the research was to determine how to conduct a simulated occupational experience program in distributive education in rural disadvantaged areas and to assess the effects of a simulated program in vocational-technical schools on adoption of programs in cooperating schools.

The specific objectives were:

1. Develop a procedure for training through simulated occupational experiences.
2. Develop specification for a simulated laboratory for providing occupational experiences.
3. Develop a curriculum for 11th and 12th grade students.
4. Determine facilities and equipment needed.

5. Evaluate programs and effectiveness of simulated experiences in securing and maintaining employment.

The project was evaluated as most effective in isolated rural areas where training stations were not available.

Mobile Training Facilities

Due to their remote geographic location, rural disadvantaged students have been difficult to reach with conventional vocational and technical programs. The mobile training facility is one program developed to reach these people. In the past, vocational educators have experimented with mobile facilities primarily to teach work entry skills (Griessman and Densley, 1969). One of the most complete studies on the status of mobile training facilities was conducted by Wheeler (1966) who reviewed over 185 sources and reported that 36 states were using the mobile concept.

An example of mobile training efforts for the rural disadvantaged was conducted by The University of Nevada's School Planning Laboratory (1967). This program was aimed at developing job entry work skills for Arkansas' rural unemployed and low income earners. Research was done on the feasibility and methods of using mobile facilities in upgrading work skills of rural low income wage earners including small acreage farmers of minimum income, the rural low income Negro population, and young rural school dropouts.

The approach used by the University of Nevada included two mobile units: one as an exploratory and recruiting unit, the second as the actual training unit. The actual training given was based on specific skill clusters which were found to be in demand in the student's geographic area. Included in the program was appliance repair, drycleaning, and small engine repair.

The research project covered 10 vocational-technical schools and was administered by the Vocational Division of the Department of Education in Nevada. A pre-enrollment survey was made to identify the considerations important for establishing the mobile training concept. These considerations included:

1. employment opportunities open to persons with minimal work skills.
2. training experiences which potential students had been exposed to during the previous two years.
3. identification of basic work skills which would provide wide entry into the local area labor force.
4. effective methods to introduce the usefulness of a mobile skill development unit.
5. the most productive approach for introducing the mobile concept for training rural unemployed.

From a survey of potential rural disadvantaged students, it was found that mobile training units would need to be placed close to the living areas of the trainees. Those surveyed also identified the need for immediate use of new job skills on a paying job following completion of training.

The Nevada report contains descriptive information on vocational and technical mobile training experiences conducted in West Virginia, Arizona, Arkansas, Colorado, Illinois, Indiana, Michigan, Montana, Pennsylvania, Tennessee, and Virginia.

Another innovative effort involving mobile facilities to serve the vocational needs of the disadvantaged in rural areas was reported by the Missouri State Department of Education (1970). The project was designed to develop and operate an occupational earning resource production center and mobile resource dispersion system for the handicapped and rural disadvantaged adult.

The purpose of this project was to develop, operate, and evaluate a system capable of producing high quality instructional audiovisual materials of occupational content to meet the identified occupational education and counseling needs of the handicapped and disadvantaged of various Missouri districts. The training offered is based on specific occupational needs and individual achievement levels. Scheduling of the training experiences through mobile facilities is designed to be at the most convenient time for the student. The principle objectives of the project are to: 1) Identify all handicapped and rural disadvantaged residents who could benefit from occupational counseling, guidance, and vocational-technical education; 2) Produce compatible audiovisual instructional materials; and 3) Present the instructional program through mobile units at a location convenient to the student participants.

The application of mobile training facilities has been an attempt to overcome a basic problem in providing occupational training for the rural disadvantaged—their lack of mobility and remote location which prevents their attending conventional vocational-technical schools.

The Rural Task Force on Vocational and Technical Education (Office of Education, 1970), described the extensiveness of the mobile facilities concept in South Dakota. Mobile units equipped with books, films, and pamphlets were placed in vocational guidance vans. The vans were accompanied by teachers and counselors. This project reached over 5,700 students spread over a geographic area of 5,000 square miles in five sparsely populated counties in South Dakota. Utah and Arizona were reported to have similar services for instruction in specialized areas of vocational education.

Manpower Development and Training Act Projects

"Project Uplift" (Silverman, 1967) was developed to find effective ways of reaching, recruiting, training, and placing disadvantaged rural adults in jobs. A 10 county section of Northern Florida was included in Project Uplift. This follow-up study of an MDTA financed project was designed to document that the population, individuals with especially difficult employment problems, received an opportunity for training through Project Uplift; that participants were actually trainable; and that the cooperating institutions could provide adequate training.

Project Uplift demonstrated that residential facilities, operated independently of a college, are feasible and that "mass" recruitment methods can produce a sizeable number of rural disadvantaged persons for training. It was contended that availability of residential facilities increased the participation of trainees from rural and sparsely populated areas which were distant from established, conventional vocational training centers. Catharine Warmbrod (1970), found similar support in a study of residential schools for vocational training.

The training needs of the rural Negro population of the areas involved in Project Uplift (Silverman, 1967) were deemed to be diverse in nature. The report contains information which suggests that only a very comprehensive facility can provide the broad range of levels of training required. The need for instruction to be provided at pre-high school, high school, and post-high school levels was emphasized. Identified as important components of the project were the selection of training occupations, the availability of jobs, and a strong and continuous student counseling effort.

Bachmura and Southern (1963), reported on a commendatory training project involving rural youth in North Carolina under the MDTA program. In this project, three regional training centers were established for occupational training and remedial education. Included as part of the overall effort was a vocational counseling and testing service. The program has provided over 600 rural youth with occupational training opportunities.

The importance of job placement and counseling was also identified by Johnson (1967) in describing an MDTA project conducted by Tuskegee Institute. This experimental and demonstration project was designed to provide basic education, job training, job counseling, and placement in agriculture and related occupations for 180 Negro males over a one-year training period. Participants were rural disadvantaged and ranged in age from 16 to 50. They were unskilled, unemployed or underemployed, and had below an eighth grade reading ability. Those participants who were employed prior to training were earning less than $1,200 annually. The researcher reported some difficulty in recruiting hard core unemployed, which he attributed to the strong dependency relationship which existed between the very poor and their farm landlords.

A similar vocational training program for adults from disadvantaged rural areas in South Carolina was reported by the National Committee on Employment of Youth (1969). The project was planned to meet the demand for vocational education in related fields where job openings were available. A notable part of the project was the close working relationship which developed between local industry, the training institution, and the community. Vocational course work included the full range of business occupations; courses offered were very broad, and the total curriculum was based on minimum state requirements.

Stevenson (1967) conducted a follow-up study of MDTA projects conducted by Morgan State College, Baltimore, Maryland. Two projects

were carried out over a nine county area of Maryland; one designed to identify the status of occupational positions in a specific geographic area, and the other devoted to developing on-the-job training openings and meeting job entry requirements. The training project included a prevocational home study program, a network of volunteer tutors, community advisory boards, and individual and group counseling.

The training project, according to Stevenson, served an important, exemplary effort relative to program planning and innovation, but results were disappointing. Generally, trainees did not become regular employees at the termination of the program. Only 30 percent were still working with their training employer one year after termination of the program. It was concluded that an urban based college lacking experience in occupational training is not a likely organization to solve employment problems of the disadvantaged rural poor.

Migrant Workers and Special Groups

Special vocational projects for training migrant workers have been initiated by various states. National recognition of the plight of migratory workers and their educational needs was given in the 1930's (Heathershaw, 1958). The migrant education workshop sponsored by the Colorado State Department of Education and Adams State College developed guidelines for organization and administration of migrant educational programs (Burchinal, 1963). This report lists sources of help for migrants and is designed for those seeking to improve educational experiences for children of migrating workers. Over 100 selected references relating specifically to the education of migrants is listed by Heatherman (1969).

Steed (1970), reporting on vocational education programs for students with special needs in Mississippi secondary schools, reported that most teachers of special needs students were from families with an annual income of less than $4,000 and had grown up in rural areas or small towns. The majority of students in the special needs area were found to be educationally deprived. The study determined that the greatest contribution of the special needs programs was in providing students the opportunity to be successful in some area of educational experience. Providing opportunities to develop skills useful in finding adequate employment was also listed as a significant contribution of the program.

Occupational Placement Opportunities

In addition to providing actual vocational technical training for the rural disadvantaged, there is also the need to determine occupational needs of a geographical area. Both occupational needs of industry in a given area and the occupational needs of the rural disadvantaged must be considered (Bundy and Kahler, 1970). Hirst (1967), reported on a project designed to determine the extent to which jobs existed for socioeconomic disadvantaged youth of Laramie County, Wyoming, and what types of training should be given to prepare the student for available jobs. Results of the study provided: 1) determination of the types of jobs

available, 2) preliminary analysis of each job to determine the occupational needs of handicapped and disadvantaged youth and how to help them meet those needs, and 3) a sampling of out-of-school youth corps enrollees to determine the nature of their handicaps.

As indicated by Silverman (1967), actual job placement plays a most important part in vocational-technical education for any participant, including the rural disadvantaged. The absence of adequate work experience and job placement opportunities has been a major problem for the conduct of vocational-technical programs for the rural disadvantaged. The opportunity for employment in rural areas has declined over the years. New industry and jobs have been slow in coming into rural deprived areas. The movement of youth from rural deprived areas to urban or industrialized areas where employment is available has been complicated by social problems, distance, and inadequate background of the rural disadvantaged.

Many of the important constituents of a successful conventional vocational program are missing in rural deprived areas. Conventional vocational programs need to be based on previously established data relative to employment supply and demand and consideration of student mobility (National Advisory Council on Vocational Education, 1968). Program establishment of vocational training for the rural disadvantaged is no different; however, the requisite for a conventional vocational program will very likely be missing. The number of available students may be great, but scattered over a large geographic area. The occupational opportunities for training and placement may be very limited.

In a study of occupations involving 1,074 rural disadvantaged persons, Taylor and Glasgow (1963) found occupational structures of a particular area set sharp limits on the type of job placement opportunities available. The data suggested two directions for occupational placement and vocational training: 1) a program for those rural disadvantaged who understand and accept the existing occupational hierarchy of their areas, 2) a special action program for those who do not understand the occupational hierarchy in their areas. This was identified as a program aimed at changing perceptions and goals of the rural disadvantaged from a subcultural to a broader orientation of job opportunities (Taylor and Glasgow, 1963).

TRENDS IN VOCATIONAL AND TECHNICAL EDUCATION

Although rural disadvantaged persons receive much less consideration from educators in vocational and technical education than other audiences, the literature does reflect some important trends which deserve to be mentioned. There have emerged some successful educational methods and techniques designed to overcome special problems confronting vocational and technical education for the rural disadvantaged.

According to the National Advisory Council on Vocational Education (1968), recent vocational enrollment trends are more in line with labor market developments than ever before. There are, however, rapidly developing differences between supply and demand for trained personnel in some occupational areas. These areas have implications for training the rural disadvantaged. The National Advisory Council on Vocational Education report (1968) contains data indicating that distributive education enrollments are low when compared to the proportion of sales positions available across the country. Expansion of the technical and health fields has advanced considerably beyond the enrollment in vocational and technical education. Other areas needing attention include consumer and producer service occupations, public employment areas, and unskilled job areas.

The rural disadvantaged student, faced with limited opportunities in conventional rural employment areas, needs vocational-technical education that will prepare him for direct entry into available occupations. If such occupations are not available in the locality of the rural disadvantaged, the student should have opportunity for background preparation so that, through mobility, he can secure the necessary training to take advantage of such opportunities in other geographic areas.

The opportunity for rural disadvantaged students to gain the necessary training through vocational and technical education is still lacking. The disadvantaged and minority groups are more deprived in rural than urban areas due to the lack of needed vocational programs (Griessman and Densley, 1969; Mercure, 1967). Existing schools have been inadequate in their attempts to meet the needs of these groups. According to Jones (1963) our schools have not had the resources and creativity necessary for success with special rural youth groups. Notably lacking in our vocational and technical education effort has been a concern for training the rural disadvantaged.

Concern For Meeting Needs

Even though our current special education programs such as the Manpower Development and Training Act (MDTA), Economic Development and Public Works Act (EDA), Economic Opportunity Act (EOA), and the Vocational Education Act (VEA) do provide training for rural disadvantaged audiences, the effect has been secondary in nature (Aller, 1967). The rural disadvantaged have not received the training opportunities that urban disadvantaged have received.

At the National Outlook Conference on Rural Youth, Mueller (1967) indicated our efforts are generally falling short of providing adequate vocational-technical training to minorities and special disadvantaged youth. A more positive note is reflected by the current interest in innovative and pilot projects to serve the rural disadvantaged. The future of adequate vocational-technical education for the rural disadvantaged appears hopeful. According to Mueller (1967), the current trend among educators and educational agencies is toward an awareness of the occupational training problems found in groups with special needs. The trend is toward improvement and vocational-technical education has an important role to carry out in continuing this trend.

Attitudes toward vocational-technical education are a crucial factor in program acceptance. According to the National Advisory Council on Vocational Education (1969), "There is a national attitude which says vocational education is designed for some one else's children." Vocational education needs to accept the challenge of providing the highest caliber of educational programming, instruction, and community relationships to overcome any existing negative attitudes and to discourage, through superior effort, the formation of a poor educational image in the future. This responsibility rests on vocational and technical education. It is imperative that vocational, technical, and occupational education in rural areas be comparable in quality to similar educational programs in urban areas (Bishop, 1970).

Because of reluctance to change from within the rural disadvantaged areas and general apathy from urban society, Griessman and Densley (1969) believe that current problems of rural areas which hinder occupational education will not improve rapidly. These authors feel that concern for meeting the needs of the rural disadvantaged will improve only if matters worsen to the extent that the nation comes to perceive the task of educating the rural disadvantaged with alarm. Griessman and Densley state that matters will slowly worsen, particularly when compared with urban and suburban areas.

Commitment to Vocational-Technical Education

The concern on the part of educators, community and national leaders, and legislators for the provision of adequate occupational training is making a difference. The Vocational Education Amendments of 1968 specifically require that a minimum of 15 percent of the federal allotment to vocational education be limited to disadvantaged persons. Enrollment in vocational and technical programs for students with special needs has increased (National Committee on Employment of Youth, 1969). The National Advisory Council on Vocational Education (1968) recommended increased federal sharing in the cost of providing for the needs of disadvantaged students and disadvantaged areas. The Division of Vocational and Technical Education has assessed the status and progress of vocational education for persons with special needs since 1968. There was a definite

increase in the number of states which have full-time supervisors of programs for persons with special needs (Aller, 1967).

Initiated by special category legislative actions, numerous vocational-technical and occupational programs have been providing important training opportunities to rural disadvantaged. On the national level, such efforts as the Vocational Education Act of 1963, amended in 1968, The Manpower Development and Training Act, and the Neighborhood Youth Corps have spawned increasing vocational-technical and occupational training opportunities which are benefiting rural disadvantaged youth.

Approach to Vocational-Technical Education

Conventional vocational-technical efforts have continued to serve the rural disadvantaged, however, the service provided has fallen short of meeting needs of this special group. Many schools are inadequately housed and equipped to offer the comprehensive education and occupational experiences required for entry into growth areas of today's job market.

A positive approach to providing vocationally oriented education programs for rural disadvantaged suggested that full development of economically depressed rural areas will occur only when business, industry, and education join forces in a planned, systematic attack on social and economic problems (Fuller and Phipps, 1968b; Breathitt, 1967a). Federal funding of vocational-technical education should include incentives to insure that schools cooperate closely with industry and organized labor. The result should be a merging of on-the-job training and apprenticeship programs. Cooperative arrangements should be developed with industry so that vocational schools can concentrate on basic skills, with specific job training left to industry.

In a follow-up study of "Project Uplift," Silverman (1967) stated that diverse training needs of the Negro population in specific areas indicate that only a very comprehensive approach can provide the broad range in levels of training needed in today's job market.

PROVISION TO OVERCOME SPECIAL PROBLEMS OF VOCATIONAL-TECHNICAL EDUCATION

As vocational educators have developed programs for their students, new concepts and methods have come into use. One of the major organizational approaches to providing occupational training has been the emergence of the area regional vocational school. Griessman and Densley (1969) state that area vocational schools represent a major concept in improving vocational education opportunities for rural youth. As indicated, rural disadvantaged students are many times prohibited from attending occupational training centers in urban areas because of limited economic resources and their geographic remoteness. For many, the area vocational school provides the needed training closer to their homes and within their economic restraints.

The trend toward applying innovative vocational education programs has been very important in overcoming special problems of occupational training for rural disadvantaged students. Mobile facilities have been adopted by numerous states. The utilization of simulation in occupational training has proven advantageous where rural youth, lacking a training station or cooperating agency in their home community, could be trained through distributive education programs (Riley and Omvig, 1970).

The problem of occupationally trained youth moving from their home areas only to find that they are inadequately trained for employment in an urban area is being approached through providing more comprehensive training experience. Dawson (1964) states that education for vocational competence cannot be limited to local labor requirements. More than 25 percent of the nation's population in 1960 lived in a state other than the one in which they were born. Since the labor market is national in scope, not just regional, Dawson believes occupational training opportunities for vocational students must be national in purposes and objectives.

Special education students, children of migrant families, and rural disadvantaged students have not competed well in conventional vocational-technical training experiences. The trend is toward providing for the individual's personal needs in these cases. Steed (1970) found the greatest achievement of these vocational education programs for special needs students was in providing the students with opportunities to be successful in specific areas throughout their occupational training. Plans were made and carried out to provide the necessary skills which would enable these students to find adequate employment. Walker (1970) determined the key to adjustment in vocational training for rural disadvantaged youth was enjoyable, purposeful activity that facilitated, on the part of the students, accomplishment and the desire to continue in additional activities.

Effective utilization of residential schools may provide the type of environment conducive to assimilation of vocational-technical education for geographically isolated rural disadvantaged youth. This may be par-

ticularly true for youth from environments not compatable with positive modern-day learning experiences and available occupational areas. In this respect, one of the provisions of the Vocational Education Act directs the establishment of residential vocational education schools to serve rural and disadvantaged youth who are geographically isolated from adequate vocational training (Davis, 1969).

SUMMARY AND RECOMMENDATIONS

Research on vocational and technical education for the rural disadvantaged was found to be noticeably lacking. The existing research tends to be descriptive in nature and general in its application to specific educational and occupational problems of rural disadvantaged youth and adults. The preponderance of research in the area appears to be in identifying and describing the rural disadvantaged population and their specific socioeconomic, cultural, and educational disadvantages.

In the last decade there has been an increase in the number and extensiveness of innovative and exemplary vocational and technical programs for the rural disadvantaged. Along with increased emphasis on pilot programs and demonstration projects has been the emergence of the experimental design study in testing aspects of socioeconomic, cultural, and various other factors which may influence the success of vocational-technical education.

In the context of vocational and technical education, the rural disadvantaged are identified as persons having academic, socioeconomic, cultural, or other handicaps that prevent them from succeeding in available vocational education programs resulting from poverty, neglect, social, and cultural isolation. These individuals are found to have difficulty and limited success in conventional school settings. In this respect, the rural disadvantaged are characterized by various similarities such as low family income, poor housing, low parental education, low reading ability, and high unemployment. According to researchers, the rate of unemployment is 18 percent for rural areas. The rural rate of underemployment is estimated to be 37 percent. Research indicates that 43 percent of the nation's poor are living in rural America. This represents some 14 million persons, approximately 1.3 million of which are in the 15-19 year age category. The research reported indicates that the value orientation of many rural youth may fail to bring about a successful transition from rural disadvantaged into the country's labor force. Other problems leading to disadvantagement for the rural population are found to relate to specific areas such as social, cultural, education, or economic conditions. Prevailing research tends to describe existing conditions with less attention being given to testing causal relationships between disadvantagement and success of vocational and technical education for the rural disadvantaged.

In addition to a need for more stringent research methodology in testing causal relationships relative to the effectiveness of vocational-technical education, researchers must also address themselves more completely to the task of adequately defining the rural disadvantaged relative to specific vocational and technical education objectives.

The research reported indicates an urgency for vocational and technical training for the rural disadvantaged. Generally, existing educational programs have ignored approaches which would bring about desirable changes in the attitudes and behavior which lead to higher levels of vocational competence for the rural disadvantaged. Research has described

occupational training for specific job areas. There is an absence of research indicating the advisability of this more narrow occupational approach compared to one of more broad occupational training and orientation to meeting the world of work. A majority of the studies cited have dealt only with the educational needs of local areas rather than large geographic areas.

Research suggests that vocational and technical education for the rural disadvantaged must also include those individuals that can benefit from continuing education and upgrading work skills. Noticeably lacking in the research on the rural disadvantaged are educational efforts to provide for employment growth in selected occupational areas. The educational effort to avoid training for the dead-end job needs immediate attention if vocational and technical education is to adequately provide for the rural disadvantaged.

It is clear that the rural disadvantaged have inadequate vocational training opportunities. The research reported indicates that the role of government in providing legislative and financial support for occupational education in the nation has increased, however, the majority of researchers indicate that the rural disadvantaged have not benefited from these efforts proportionally as much as the urban disadvantaged populations. The research reported includes such antipoverty and training efforts as The Manpower Development and Training Act of 1962, The Job Corps, Vista, The Neighborhood Youth Corps, The War on Poverty, and The Vocational Education Acts as making provision for the rural disadvantaged. The Vocational Education Act and Amendments have directed attention and resources to meeting educational and occupational needs of the rural disadvantaged.

Business and industry is reported by researchers to be sympathetic to the special training needs of the rural disadvantaged; however, in the relative absence of extensive research findings on projects involving business and industry in rural vocational and technical education, it is safer to assume that industry involvement has been minimal. It is clear that existing research on vocational and technical education has been largely completed and reported in the context of state departments of education, public educational institutions, and other individuals or groups with an academic environment. A major void exists in the availability of research reports and information on vocational and occupational education efforts for rural disadvantaged which involves private industry. There is need for broader dissemination of research findings, and information by business and industry relating to their participation in vocational and occupational education for the rural disadvantaged.

The literature and research publications contain evidence that federal financial assistance has increased the number of research projects, pilot programs, exemplary efforts, and special vocational-technical education programs for the rural disadvantaged. Local and area vocational schools have provided a limited program to students identified as rural disadvantaged. Researchers report most of these efforts are through conven-

tional vocational and technical programs. Research reveals team teaching efforts, individual student training programs, and integrated career development curricula as developing generalized vocational capabilities. Research information also indicates that area schools have contributed toward the sharing and pooling of total resources in a geographic area. However, the critical problem with current area vocational and technical programs as seen by researchers, is the relatively small percentage of rural disadvantaged that are being served.

New dimensions described by recent research in vocational-technical education for the rural disadvantaged include many innovative and exemplary programs. The research findings reflect more attention being devoted to descriptive aspects of the audience and programs with less reported on actual success and accomplishment. If such investigations are to be effective in adding to usable knowledge in training the rural disadvantaged, more attention should be given to reporting results. In this respect, the small number of evaluative studies were found to be limited to contributions in local or specific geographic and occupational areas rather than broad program outcomes relative to project objectives.

Innovative vocational and technical programs for the rural disadvantaged included a diverse representation such as a comprehensive education service to meet peculiar vocational training needs of given geographic areas and programs for migrant workers on farm equipment operation and maintenance. A more extensive project to develop and evaluate a vocationally oriented, family-centered education program was initiated in Illinois (Phipps, 1970). The purpose of the Illinois project was to bring increased utilization of the potentials of rural disadvantaged citizens.

Preschool through adult and continuing education programs were reported by the researchers. Activities reported contained vocational exploration for youth, individual and group counseling and in-service training for teachers of the rural disadvantaged. The research revealed an increase in the number of prevocational and occupational exploratory programs.

A new dimension indicated in recent research is the application of occupational experience and training for the rural disadvantaged. The concern to train for broad employment experiences was reflected in a number of such projects, however, evaluation of these efforts was lacking.

Researchers reported an increase in the development and use of mobile training facilities to meet educational needs of the rural disadvantaged. The research information revealed that mobile facilities can effectively provide vocational career counseling, development of occupational skills, on-the-job counseling, and job placement services. Researchers indicated a need to further identify positive methods for introducing the mobile training concept to the rural disadvantaged and to test effective means of coordinating mobile units to capitalize on existing facilities and conventional vocational-technical programs.

The research revealed a trend toward developing special vocational-

technical and occupational training efforts for disadvantaged Indians and Negroes. Training needs of these groups were reported to be diverse in nature and the use of comprehensive facilities were recommnded. Pre-high school, high school and post-high school levels of vocational training were emphasized along with the need for continuous student counseling efforts.

Occupational counseling and training for migrant workers represented an area of increasing importance in research on vocational-technical education for the rural disadvantaged. Research findings indicate a need for more extensive evaluation and study of special efforts such as residential schools and recruitment methods for migrant and other groups where environmental and socioeconomic conditions prevent success with conventional programs. The important contributing factor found in successful training efforts was in providing students the opportunity to experience accomplishment and success in an educational endeavor. Actual job placement was reported as a most important part in vocational-technical education for the rural disadvantaged. Researchers reported an absence of adequate work experience and job placement opportunities, particularly in remote rural areas.

A need for extensive research on the identification of student characteristics, available occupations, geographic factors, student mobility, financial support, and employment supply and demand was indicated to be essential by researchers before entering into a vocational-technical education program for the rural disadvantaged.

Even though research on vocational-technical education for the rural disadvantaged was found to be lacking in extensiveness and quality, existing efforts have revealed several trends. According to researchers, vocational and technical enrollment is becoming more compatible with labor market demands in more occupational areas. Also, national attention is being focused on the problems of the disadvantaged. Concern for the disadvantaged in rural areas, however, still appears to receive less than the necessary attention needed to bring about significant improvement in vocational and technical education for the disadvantaged.

Current interest in innovative and pilot projects along with an increasing awareness of the occupational training problems found with special groups is reported by researchers to reflect improvement in the role that vocational-technical education has in serving the rural disadvantaged. Research contains indicators that business and industry along with private education and occupational training firms may play an increasing role in meeting the needs of rural and other disadvantaged groups. Research must be conducted to assess the value and success of these efforts and to establish the effectiveness in reaching the rural disadvantaged. Additional reviews of research on vocational-technical education for the rural disadvantaged should be directed to specific groups such as the migrant worker and the disadvantaged American Indian.

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